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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/516,268	02/29/2000	Robert George Ahrens	6-89-5-2	1790

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10/17/2003

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EXAMINER

VALENCIA, DANIEL E

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/516,268	<b>Applicant(s)</b> AHRENS ET AL.	
	<b>Examiner</b> <i>DIV</i> Daniel E Valencia	<b>Art Unit</b> 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-12, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 5-8, 13-16, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |                                                                                              |                                                                             |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

Applicant's communication filed August 27, 2003 has been carefully studied by the Examiner. In accordance with the communication filed, claim 9 has been amended.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 9-12, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laor U.S. Patent No. 6,031,947 (previously cited). Laor discloses a switch that teaches essentially all the elements of the abovementioned claims. Regarding claims 1, 9, and 17, Laor discloses a method of aligning fiber ends including using a bundle with a receiving fiber that analyzes the signal strengths of the surrounding fibers relative to the receiving fiber in order to detect the location and provide a feedback for precise alignment (col. 3, lines 14-24 and col. 5, lines 53-64). As to claims 2, 3, 10, and 11, one of ordinary skill in the art would recognize that selecting N to facilitate fabrication and having a core diameter that captures as much light as possible are desirable features. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to select an appropriate N and use a core diameter to capture as much light as possible.

Although Laor does not explicitly state that the receiving fiber is recessed as in claims 4, 12, and 18, this is a non-critical limitation and does not further limit the scope of the invention. On page 3, lines 21-25 the specification states that the invention could be employed using fibers that terminate in the same plane, or where the receiving fiber is recessed. Additionally, one of ordinary skill in the art would recognize that there are various reasons one might recess a central fiber. For example, one may want to recess the central fiber in order to insert a lens therein. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to recess the receiving fiber in the device disclosed by Laor.

#### ***Allowable Subject Matter***

Claims 5-8, 13-16, 19, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

For reasons for indicating allowable subject matter regarding claims 5, 13, and 19, see the previous Office Action (Paper No. 5, page 4, paragraph 3).

For reasons for indicating allowable subject matter regarding claims 7, 15, and 20, see the previous Office Action (Paper No. 5, page 4, paragraph 4).

#### ***Response to Arguments***

Applicant's arguments filed August 27, 2003 have been fully considered but they are not persuasive.

In the communication filed, Applicant asserts that Laor does not disclose or suggest repositioning the receiving fibers of an optical communication system based on an intensity of said optical communication signal received by said receiving fiber relative to an intensity of said optical communication signal received by said array of optical fibers. However, Laor *does* suggest these limitations in column 3, lines 14-24 and col. 5, lines 53-64. Although Laor does not refer to a “receiving fiber”, anyone of the fibers disposed in the center of the receiving bundle could be taken to be the “receiving fiber” referred to by the claim. The passages also indicate that Laor’s device uses relative signal strength to reposition the bundle (col. 3, lines 14-16). Examiner would also point out that the claim language is sufficiently broad for “intensity” to refer to a lack of a signal or an intensity of zero.

Additionally, Applicant asserts that Laor does not disclose or suggest repositioning said optical bundle to reduce the signal strength in said fibers in said array of optical fibers and to increase the signal strength in said receiving fiber. However, any one of ordinary skill in the art would recognize that this is essentially what the device in Laor does. In order to align the fibers, the control signal from the surrounding fibers would have to be decreased, while the control signal from the intended or “receiving fiber” would necessarily be increased. Otherwise the device would be moving away from proper alignment.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

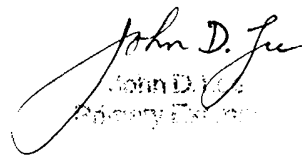
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel E Valencia whose telephone number is (703)-305-4399. The examiner can normally be reached on Monday-Friday 9:30-6:00.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.



DEV



John D. Lee  
Advisory Examiner

04/16/208

09/17/2018